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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,022	01/29/2002	Frank Runge	52141	2669
26474	7590	12/30/2004	EXAMINER	
KEIL & WEINKAUF 1350 CONNECTICUT AVENUE, N.W. WASHINGTON, DC 20036			SHEIKH, HUMERA N	
			ART UNIT	PAPER NUMBER
			1615	

DATE MAILED: 12/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/058,022

Applicant(s)

RUNGE ET AL.

Examiner

Humera N. Sheikh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Status of the Application

Receipt of the Request for Continued Examination (RCE) under 37 CFR §1.114, the Preliminary Amendment and Applicant's Arguments/Remarks, all filed 09/28/04 and the Supplemental Preliminary submission and Applicant's Arguments/Remarks, both filed 12/03/04 is acknowledged.

Claims 1-20 are pending. New claims 16-20 have been added. Claims 1-20 are rejected.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/28/04 & 12/03/04 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-4, 6, 7 and 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen *et al.* (WO 91/06292) in view of Horn *et al.* (US Pat. No. 4,522,743).

Jensen teaches a process for preparing powders comprising water dispersible hydrophobic or aerophilic powdered colorants – carotenoids, wherein the solids (carotenoids) are milled in an aqueous medium in the presence of a hydrocolloid to obtain a suspension containing suspended particles, finely dividing and drying the suspension to obtain a powder, whereby soybean protein is used as a suitable protective hydrocolloid and sucrose is contained in the aqueous medium (see reference pages 1, 4, 5, examples on pgs. 8-14 and abstract).

Solid hydrophobic/aerophilic materials that can be milled and encapsulated in the process are carotenoids, such as Beta-carotene, lutein, beta-apo-8'-carotenal, canthaxanthin, astaxanthin, citranaxanthin, derivatives thereof and the like (page 4, lines 25-33).

Hydrocolloids that can also be used include exudates, extracts from seaweed, extracts from plants, extracts from marine and terrestrial animals, such as gelatins and other proteinaceous hydrocolloids, flours from seeds, such as soya bean and proteins from seeds, such as soya bean protein, etc. (pg. 4, line 35 thru pg. 5, line 9).

The aqueous medium can further contain excipients in an amount of up to 70 percent by weight of the suspension, such as a dissolved carbohydrate, such as sorbitol and sucrose, and/or an antioxidant or oil containing an antioxidant. The resulting suspension is finely divided and dried using any combination of conventional methods, such as spray cooling, spray drying, modified spray drying or sheet drying, crushing, etc. (page 5, lines 19-26).

In the spray cooling, spray drying and modified spray drying processes, excipients that may be used are, for example, starches, modified starches, *lactose*, mannitol, ethyl cellulose, etc. (pg. 6, line 39 thru pg. 7, line 5).

Jensen states that the amounts of the hydrophobic/aerophilic solids (carotenoids) are used in an amount of up to 71% (pg. 3, lines 5-13). This amount meets the applicant's claimed range of from 0.1 to 30% by weight.

The carotenoid preparation may be used in pharmaceutical compositions, foods and feedstuffs (pg. 8, lines 1-7).

Example 1 demonstrates the teaching of a milled suspension using a carotenoid - Beta-carotene in a solution mixture with sucrose, ascorbyl palmitate and tocopherol (page 8). Example 6 provides canthaxanthin in a solution with sucrose having a temperature of 65°C.

Jensen's patent is lacking in the sense that he teaches sucrose, rather than lactose in a mixture with a hydrocolloid. However, lactose is a well-known protein stabilizer conventionally used by one skilled in the art. Such skill is also evident from the reference of Horn et al. (see below).

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Horn et al. ('743) teach a process for preparing a finely divided pulverulent carotenoid composition wherein sugar or sugar alcohols, such as sucrose and lactose are advantageously added to the colloid in order to increase the mechanical stability of the end product (see reference col. 3, lines 27-39).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings of Horn within Jensen, because Horn explicitly teaches that it is advantageous to add lactose or sucrose to a colloid, which functions to increase the mechanical stability of the end product and similarly Jensen teaches a process utilizing carotenoids in a mixture with sugars or sugar alcohols, such as sucrose. One skilled in the art would be further motivated to use either lactose or sucrose in admixture with a carotenoid, since they are functionally equivalent as taught by Horn. The expected result would be a mechanically stabilized carotenoid composition.

Claims 5, 8 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen et al. (WO 91/06292) as applied to claims 1-4, 6, 7 and 9-15 above and further in view of Dobler et al. (WO 96/01570).

The teachings of Jensen have been discussed above.

Jensen does not teach a partially degraded soybean protein having a degree of hydrolysis of from 0.1 to 20%

Dobler teaches protective colloids for fat-soluble active substances (carotenoids), wherein the protective colloids are partially degraded soybean proteins having a degree of hydrolysis (degradation) of 0.1 to 5% (pg. 3, lines 4-8).

Therefore it would have been obvious to one of ordinary skill in the art to use the combined teachings of *Dobler* within *Jensen* because *Dobler* explicitly teaches a carotenoid composition containing partially degraded soybean proteins with a degree of hydrolysis of 0.1 to 5% (instant range recites 0.1 to 20%) and similarly *Jensen* teaches a carotenoid/hydrocolloid preparation and process for preparing whereby soybean protein is used as the suitable protective hydrocolloid. The expected result would be an effective carotenoid formulation having improved stability.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Dobler et al.* (WO 96/01570) in view of *Horn et al.* (US Pat. No. 4,522,743).

Dobler teaches partially degraded soybean proteins as protective colloids for carotenoids wherein water-dispersible compositions are produced with soybean proteins and protective colloids in an aqueous medium and whereby glucose is contained in the aqueous medium to obtain a resulting dry powder (see reference pages 1-4 and examples).

According to *Dobler*, an objective of the invention is to find suitable protective colloids for fat-soluble active substances that do not involve technical disadvantages for processing and make it possible to produce in a simple way, stable, coldwater-dispersible compositions of fat-soluble active substances (carotenoids) (pg. 2, line 45 thru pg. 3, line 2).

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Dobler teaches that the protective colloids for fat-soluble active substances (carotenoids) are partially degraded soybean proteins, which have a degree of hydrolysis (degradation) of 0.1 to 5% (pg. 3, lines 4-8).

The soybean proteins usually employed are commercial soybean protein isolates and concentrates with protein contents of from 70 to 90% by weight, where the remaining 10 to 30% by weight represent other undefined plant constituents. The soybean protein isolates are incubated with the enzyme in aqueous medium, preferably at from 50 to 70°C and at a pH of from 7 to 9. The suitable protein to enzyme ratio for the desired degree of degradation (hydrolysis) can be determined by laboratory tests which are simple for the skilled worker (pg. 3, lines 24-32).

Suitable fat-soluble active substances are carotenoids, for example, Beta-carotene, apocarotenal, ethyl apocarotenoate, canthaxanthin, zeaxanthin, astaxanthin, lycopene, citranaxanthin or mixtures of said substances (pg. 3, lines 38-43).

The fat-soluble active substances can be added to the compositions either in pure form or as a mixture with physiologically tolerated oils (i.e., sesame oil, soybean oil, corn oil, etc.). In addition to the fat-soluble active substances and the partially degraded soybean proteins, the compositions may also contain conventional auxiliaries, for example, sugars and sugar alcohols, starch and derivatives, stabilizers and emulsifiers (pg. 4, lines 1-11).

The compositions can be either in liquid or solid form, however solid compositions are preferred. Spray drying or spray fluidized bed drying can be used to produce the solid compositions. The fat-soluble active substances are contained in amounts from 2 to 40% of the

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total weight of active substance and protective colloid (pg. 4, lines 21-29). This range meets the applicant's claimed amounts of 0.1 to 30% carotenoid content.

According to Dobler, the compositions are outstandingly suitable for use in livestock nutrition, as an additive to foodstuffs or as an addition to drinking water. Carotenoid-containing compositions are also suitable as foodstuff colorants, especially for soft drinks (pg. 4, lines 34-40).

The examples on pages 5-7 demonstrate a process for preparing dry powders comprising protective colloids - soybean proteins in a mixture solution with various carotenoids and glucose. For instance, example 4 provides a dispersion of citranaxanthin with soybean protein isolate and glucose to obtain a dry powder containing 3.0% citranaxanthin content.

Although Dobler is lacking in the sense that he teaches glucose, rather than lactose in combination with soybean protein and carotenoids, one of ordinary skill in the art would be able to substitute glucose for lactose to obtain similar results. Such skill is also evident from the reference of Horn *et al.* (see below).

Horn *et al.* ('743) teach a process for preparing a finely divided pulverulent carotenoid composition wherein sugar or sugar alcohols, such as glucose and lactose are advantageously added to the colloid in order to increase the mechanical stability of the end product (see reference col. 3, lines 27-39).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings of Horn within Dobler, because Horn explicitly teaches that it is advantageous to add either lactose or glucose to a colloid, which functions to increase

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the mechanical stability of the end product and similarly Dobler teaches a process utilizing carotenoids in a mixture with sugars or sugar alcohols, such as glucose. One skilled in the art would be further motivated to use either lactose or glucose in admixture with carotenoids, since they would be functionally equivalent and provide a similar outcome, as taught by Horn. The expected result would be a mechanically stabilized carotenoid composition.

Response to Arguments

Applicant's arguments filed 09/28/04 & 12/03/04 have been fully considered, but they are not persuasive.

Firstly, Applicant argued regarding the 35 U.S.C. §103(a) rejection of claims 1-4, 6, 7 and 9-15 over Jensen et al. (WO '292) taken alone or in view of Horn et al. (US '743) stating, "Jensen mention soybean protein as one representative within a diverse group of hydrocolloids encompassing at least thirteen generic groups of hydrocolloids of natural and synthetic origin which are further illustrated by numerous representatives. Jensen enumerates the different generic groups and their representatives as equivalent. Jensen provides no motivation to specifically select soybean proteins from the various groups of hydrocolloids of natural and synthetic origin."

This argument has been considered, but was not found persuasive. Ample motivation is provided by Jensen et al. to employ suitable hydrocolloids such as soybean proteins, since the prior art teaches and suggests the inclusion of soybean proteins in the preparation of a hydrophobic solids formulation. See particularly claim 10 of Jensen et al, which claims soya

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bean protein as one of the preferred hydrocolloids of choice. Moreover, the mere teaching of the inclusion of soybean proteins as suitable hydrocolloids in the prior art is sufficient and provides ample motivation for one of ordinary skill in the art to use the soybean proteins, based on the teachings of Jensen.

Applicant argued, "Jensen teaches sucrose as one of two representatives for carbohydrates, but does not mention lactose. Jensen provides nothing which would motivate one of ordinary skill in the art to specifically select lactose from the generic group of carbohydrates. The disclosure of Horn et al. that sugars and sugar alcohols are equally suited to improve the mechanical stability of certain swellable colloids does not add anything to the teaching of Jensen et al. which would motivate a person of ordinary skill in the art to focus on a particular colloid or on a particular sugar or sugar alcohol. A specific selection and combination of soybean protein and lactose requires the guidance, provided by Applicant's invention and is, therefore, based on hindsight."

These arguments have been thoroughly considered, but were not persuasive. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Jensen et al., as delineated above, teach a process for preparing powders comprising water dispersible hydrophobic or aerophilic powdered colorants – carotenoids, wherein the solids (carotenoids) are

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milled in an aqueous medium in the presence of a hydrocolloid to obtain a suspension containing suspended particles, finely dividing and drying the suspension to obtain a powder, whereby soybean protein is used as a suitable protective hydrocolloid and sucrose is contained in the aqueous medium (see pgs. 1, 4, 5, Exs. on pgs. 8-14 & abstract). Although Jensen et al. teach sucrose, rather than lactose in a mixture with a hydrocolloid, Horn et al. remedies this deficiency of Jensen et al. by explicitly teaching a process for preparing a finely divided pulverulent carotenoid composition wherein sugar or sugar alcohols, such as sucrose and lactose are advantageously added to the colloid in order to increase the mechanical stability of the end product (see col. 3, lines 27-39). Horn et al. provides sufficient motivation to one of ordinary skill in the art to use either lactose or alternatively, sucrose, with the expectation of obtaining increased mechanical stability of the final product.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Next, Applicant argued regarding the 35 U.S.C. §103(a) rejection of claims 5 and 8 over Jensen et al. (WO '292) in view of Dobler (WO '570) stating, "The disclosure of Dobler et al. merely provides that conventional auxiliaries which can be employed include inter alia sugars and sugar alcohols such as glucose. The teaching of Jensen et al. taken in view of Dobler et al.

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would not motivate a person or ordinary skill to focus on the specific selection and combination of partially hydrolyzed soybean protein and lactose.”

This argument was not found persuasive. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Jensen is lacking in the teaching of the specific degree of hydrolysis. Dobler et al. teach protective colloids for fat-soluble active substances (carotenoids), wherein the protective colloids are partially degraded soybean proteins having a degree of hydrolysis (degradation) of 0.1 to 5% (pg. 3, lines 4-8). Dobler teach overlapping amounts of the degree of hydrolysis, as instantly claimed. Therefore ample motivation is provided to one of ordinary skill in the art to use the teachings of Dobler et al. to obtain suitable degrees of hydrolysis. Moreover, the Examiner points out that generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). Applicants have not demonstrated any showing of criticality in the claimed percentages of hydrolysis, nor have Applicants shown any unexpected and/or unusual results attributable to the instantly claimed hydrolysis percentages. The prior art

teaches similar formulations which comprise similar elements, utilized for the same field of endeavor as that desired by Applicants.

Applicant argued regarding the 35 U.S.C. §103(a) rejection of claims 1-15 over Dobler et al. in view of Horn et al. stating, "At best, the disclosures merely provide that the enumerated sugars and sugar alcohols are equivalent in their capability to improve mechanical stability."

Examiner was not persuaded by this argument, since Dobler teaches protective colloids of soybean proteins for fat-soluble active substances (carotenoids), wherein the partially degraded soybean proteins have a degree of hydrolysis (degradation) of 0.1 to 5% (pg. 3, lines 4-8). The art teaches similar components as that desired by Applicants.

Applicants argued, "Applicant's data show that the expectation is not met when the protective colloid is a soybean protein. More particularly, Applicant's data show that the preparation which is obtained when the soybean protein is employed in combination with lactose has distinctly improved properties when compared with a preparation having soybean protein in combination with glucose as exemplified by Dobler et al."

This argument was not persuasive. The art teaches and recognizes the use of protective colloids in combination with sugars to obtain suitable dry powder formulations. Applicant's argument of obtaining 'improved properties' is not persuasive since the 'discovery of a new property or use of a previously known composition, even if unobvious from the prior art, cannot impart patentability to claims to known compositions, *In re Spada*, 15 USPQ 2d 1655. Moreover, the instant claims are not limited to the examples shown by the prior art.

Next, Applicants stated "Applicants have conducted supplemental experiments corroborating that the use of soybean protein in combination with lactose is essential in the

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preparation of dry powders. The data shows that the nature of the protective colloid and the sugar employed in combination has a distinct and unexpected impact on the storage stability of the carotenoid dry powder. The data corroborates that Applicant's combined use of soybean protein and lactose provides for distinctly improved properties, that could not be reasonably expected based on the teachings of Jensen et al., Dobler et al. and Horn et al. The teachings of Jensen et al., Dobler et al. and Horn et al. clearly fail to suggest that the properties of a carotenoid dry powder can be altered or can be significantly improved when a specific group of protective colloids and a specific sugar are selected and combined."

This argument has been considered, but was not found persuasive. It is not necessary that the prior art teach each and every property that accrues from the use of a particular ingredient, merely that the prior art suggest that component in a related field of endeavor for a similar purpose is sufficient. Applicant's argument that the 'combination of a protective colloid and a sugar provide a distinct and unexpected impact on the storage stability of the carotenoid dry powder' is not persuasive since 'although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims'. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The instant claims are still broad in nature, with no specific formulations with specific amounts being claimed. The prior art teaches suitable and effective processes for the preparation of dry carotenoid powders, utilizing protective colloids in combination with various sugars. While Jensen et al. and Dobler et al. are distinct as to the sugars incorporated (i.e., sucrose, glucose), Horn et al. teaches the employment of sugars, such as glucose and lactose that are advantageously added to the colloid in order to increase the mechanical stability of the end product. Horn et al. teaches that it is well known to use various

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sugars, which include lactose, as claimed by Applicant. Since the prior art teaches similar formulations involving similar elements, it is expected that the properties of the elements would also be the same. The prior art also addresses the issue of stability and teaches that very stable carotenoid compositions are obtained using the ingredients employed by the art (see, for example, Horn et al. col. 3, lines 35-55 & col. 5, lines 52-64). Therefore, since the prior art teaches the use of the same ingredients for the same field of endeavor and for the same intended purpose as that of Applicants, the instant invention is clearly rendered *prima facie* obvious over the cited art of record.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Humera N. Sheikh whose telephone number is (571) 272-0604. The examiner can normally be reached on Monday through Friday from 8:00A.M. to 5:30P.M., alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page, can be reached on (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

H. N. Sheikh *HNS*

Patent Examiner

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December 27, 2004

[Signature]
THURMAN K. PAGE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600